

**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF ALABAMA,
NORTHERN DIVISION**

HAROLD KELLY MURPHY,)	
)	
Plaintiff.)	
)	
v.)	Case No.: 2:06-cv-618-MEF
)	
SOUTHERN ENERGY HOMES, INC.,)	
et al.,)	
)	
Defendants.)	

**SOUTHERN ENERGY HOMES, INC.’S MOTION TO EXCLUDE TESTIMONY AND
OPINIONS OF PLAINTIFF’S EXPERT BOBBY PARKS AND REQUEST FOR *IN*
LIMINE HEARING**

Defendant Southern Energy Homes, Inc. (“Southern”) hereby moves this Court to exclude under *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579 (1992), and Fed. R. Evid. 702, the expert testimony of Plaintiff’s expert Bobby Parks (“Parks”). Pursuant to Fed. R. Evid. 104, Southern requests a hearing on this motion. *See Daubert*, 509 U.S. at 592-93 (In conducting a Rule 104(a) inquiry, the court should assess “whether the reasoning or methodology underlying the testimony is scientifically valid and ... whether that reasoning or methodology properly can be applied to the facts in issue”). As grounds for this motion, Southern states as follows:

INTRODUCTION

This lawsuit is one among dozens of individual and class action cases that have recently been brought before state and federal courts in Alabama, Louisiana and Texas. In these actions, plaintiffs claim that manufactured homes sold in certain coastal and inland regions from Texas to

North Carolina¹ are defective because the exterior walls of such homes are constructed with interior vapor barriers. Plaintiff Harold Kelly Murphy (“Murphy” or “Plaintiff”) purchased a new Southern manufactured home on December 23, 2003. Complaint, Exhibit A, ¶ 7. Murphy alleges that the design used for the exterior walls of the home is defective. *Id.* at ¶ 4.

The two sections of the HUD Code primarily at issue in this lawsuit are Sections 303(b) and 504(b). Section 303(b) provides that “All construction methods shall be in conformance with accepted engineering practices to insure durable, livable, and safe housing and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.” 24 C.F.R. § 3280.303(b). Section 504(b) governs condensation control in the exterior walls of manufactured homes, and provides for four expressly allowed wall designs. 24 C.F.R. § 3280.504(b). One of the design options specifically allowed by § 504(b) is to construct the walls with a vapor barrier of 1 perm² or less on the living space side of the wall. *Id.* at § 504(b)(1). It was this design option that Southern used in the Murphy home, constructing the walls with vinyl-covered gypsum wallboard containing an interior (i.e. on the living side of the wall) vapor barrier with a permeability rating of less than one.

Murphy bases his claims for liability primarily on the opinions and reports of specially-retained “expert” witness Bobby Parks.³ Parks performed two inspections of the Murphy home

¹ These areas are known as the “humid and fringe zone climates.” The counties included in these regions were identified in the Federal Register at 67 F.R. 20402-20403 (April 24, 2002), and are now listed in 24 C.F.R. § 3280.504(b)(4).

² Permeance is the measure of the amount of water vapor (moisture) that can pass through a specified material in a certain amount of time. The measure and degree of permeability is expressed in units referred to as ‘perms.’ Materials with high perm levels will allow more moisture or water vapor to pass through than those with lower perm values.

³ Plaintiff also relies in part on the opinions and reports of specially retained “expert” witnesses Robert Kondner and Roy Bonney. Kondner, who has never inspected the Murphy home and who bases the vast majority of his conclusions on Parks’ conclusions, is the subject of a separate *Daubert* motion. Bonney is offered exclusively for determining the cost involved in replacing any wallboard portions that are found to be defective. As a result, Bonney’s testimony is not relevant to the issue of liability and is only relevant to damages in the event liability is found.

and concluded that the wall design violates the HUD Code Section 303(b) standards for accepted engineering practices and that the exterior walls in the Murphy home suffer from extreme moisture, fungal growth, and structural deterioration as a result. Parks' opinions are obviously crucial to Plaintiff's claims, and they must be stringently evaluated by this Court in its capacity as a gatekeeper under *Daubert* and Rule 702.

SUMMARY OF ARGUMENT

Parks' testimony and opinions should be excluded because he cannot satisfy the requirements for the admissibility of expert testimony under Rule 702 and *Daubert*. He does not have any education beyond high school, and his background and training is in HVAC, not engineering, design, or the biological sciences. He lacks familiarity with many basic principles and terms common in the areas of manufactured housing design, the HUD Code, and the interpretation of mold sampling data. As a result, Parks is not qualified to testify in these areas.

In addition, Parks' methodology in his investigation of the Murphy home was unreliable and without scientific merit. First, Parks misused critical instruments while recording his data. Second, Parks failed to follow industry standards in preparing and documenting the investigation. Third, Parks employed mold sampling methods and promotes conclusions that have not been peer-reviewed for validity and are not generally accepted within the field. Fourth, Parks failed to rule out alternate sources of moisture despite undisputed evidence of a bulk water leak in the master bathroom of the Murphy home. Any one of these methodological errors is enough to undermine the reliability of Parks' opinions. Taken together, however, these errors compound upon one another such that Parks' conclusions ultimately rest on no scientific basis whatsoever.

Finally, Parks relied on inaccurate and insufficient data in his investigation. Thus, his conclusions are not supported by the evidence he gathered. For example, even though the Murphy home is located in Montgomery, Parks used weather data for Mobile in determining whether condensation was a viable moisture source. Parks also ignores the plain language of the HUD Code (and HUD's own interpretation of it) by offering the opinion that the wall design of the Murphy home violates the HUD Code. This is a remarkable opinion because *this wall design is specifically approved for all regions by the HUD Code*. Parks concludes that the Murphy walls suffered extensive water damage, yet he never tested their performance. In short, Parks makes inappropriate analytical leaps between his evidence and the opinions he forms on the basis of that evidence. In fact, the only court that has considered expert testimony from Parks in a moisture-related mobile home case described Parks as "an extreme advocate" and concluded that "the Court cannot place weight on the testimony of this witness as it is not substantiated and corroborated by the evidence on the scene."⁴ Parks is similarly attempting to introduce unqualified and unsupported opinions in this case. For all of these reasons, Parks' testimony and opinions are due to be excluded from evidence.

STANDARD FOR ADMITTING EXPERT TESTIMONY

Federal Rule of Evidence 702 governs the use of expert testimony. Rule 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

⁴ See *infra*; *Aucoin v. Southern Quality Homes, LLC*, No. 99791-C (La. Dist. 16 2005), *aff'd* by No. 06-979 (La. App. 3d Cir. 2006)

Fed. R. Evid. 702.

The amended Rule 702 codified the Supreme Court's decisions in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786 (1993), and *Kumho Tire Co. v. Carmichael*, 119 S.Ct. 1167 (1999). See Fed. R. Evid. 702 Committee Note. Rule 702 has three fundamental requirements. First, the expert must be qualified to testify. Second, the expert's opinion must be based on scientific, technical, or specialized knowledge. Third, the expert's testimony must "assist the trier of fact." See *Daubert*, 509 U.S. 579. The *Daubert* Court pointed out that a key indicator as to whether an expert's testimony assists the trier of fact is whether the method used by the expert is reliable. *Id.* at 589. Furthermore, the Advisory Committee Notes to Rule 702 state that the codification of *Daubert* "provides some general standards that the trial court must use to assess the reliability and helpfulness of proffered expert testimony." Fed. R. Evid. 702, Advisory Committee Notes.

The Supreme Court has instructed the district courts to act as "gatekeepers" in screening expert testimony. See *General Electric v. Joiner*, 522 U.S. 136, 140 (1997) (upholding a district court decision to exclude expert testimony on the ground that it "did not rise above 'subjective belief or unsupported speculation'"); *Club Car, Inc. v. Club Car (Quebec) Import, Inc.*, 362 F.3d 775, 780 (11th Cir. 2004) (affirming district court's exclusion of accountant's lost profit calculations on the grounds that it "was based on flawed methodology that was unaccepted in the accounting community"); *KW Plastics v. U.S. Can Co.*, 131 F. Supp. 2d 1289, 1294 (M.D. Ala. 2001) (motion to exclude expert's testimony on damages granted on the grounds that the "cumulative effect of [the expert's] methodological errors render[ed] the lost profits calculations speculative, without foundation, and with an unknown error rate" and therefore, "the calculations [fell] outside of the range where experts may reasonably differ."); *Benkwith v. Matrixx*

Initiatives, Inc., 467 F. Supp. 2d 1316, 1332 (M.D. Ala. 2006) (opinion by J. Fuller) (excluding the proposed expert testimony of a doctor in a product liability action against a nasal spray manufacturer and distributor because the expert did not “employ[] in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field”).

When acting in this “gate keeping” role, the trial judge must determine “whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue.” *See Daubert*, 509 U.S. at 592. Moreover, the trial judge “must determine whether the evidence is genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist.” *See Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1316-137 (11th Cir. 1999) (quoting *Rosen v. Ciba-Geigy Corp.*, 78 F.3d 316, 318 (7th Cir. 1996)).

In this case, Murphy bears the burden of proof as to the factual basis for Parks’ conclusions, the reliability of his methods, and the reliable application of his methodology to the facts. *See McCorvey v. Baxter Healthcare Corp.*, 298 F.3d 1253, 1256 (11th Cir. 2002); *Allison*, 184 F.3d at 1306 (the “burden of laying the proper foundation for the admission of the expert testimony is on the party offering the expert, and admissibility must be shown by a preponderance of the evidence.”). As detailed below, Murphy cannot carry his burden.

ARGUMENT

The testimony and reports of Bobby Parks should be excluded because Parks is not qualified as an expert in the design of manufactured housing, the interpretation of the HUD Code, or the interpretation of mold sampling data. Furthermore, the methodology used by Parks in his investigation of the Murphy home is unreliable and without scientific merit. Finally, Parks

relies on inaccurate and insufficient data in his investigation, and his conclusions are not supported by the evidence he has gathered.

I. Parks Is Not Qualified to Testify to These Matters

Parks' specialty is in HVAC, as he has more than twenty years of experience in the field. Consistent with his field of knowledge, Parks extensively tested the performance of the Murphy home's HVAC system to identify any potential causes of moisture migration into the home. *See Parks Depo.*, Exhibit B, 50:14-19. Parks found the duct leakage rate to be 'excellent' and found no significant pressure imbalances that would contribute to moisture accumulation. *See id.* at 136:13-19, 190:6-10.

Having found no significant issues with the HVAC system, Parks now proposes to testify that the exterior walls in the Murphy home are designed improperly, do not comply with HUD Code regulations, and are structurally unsound as evidenced by excessive moisture and fungal growth to the point that they will "eventually render the home unfit for it's [sic] intended purpose." *See Parks Report*, Exhibit C, pp. 1-2. Parks, however, is unqualified to testify about these matters.

To be sufficiently qualified to testify as an expert, a witness must have knowledge, skill, training and education in the subject for which his testimony is offered. Fed. R. Evid. 702; *Maiz v. Virani*, 253 F.3d 641, 644 (11th Cir. 2001) (proponent's first burden is to show that its proposed expert is "qualified to testify competently regarding the matters he intends to address."). **Nothing** in Parks' curriculum vitae indicates that he is qualified to express any opinion regarding wall designs in manufactured housing or the interpretation of mold sampling data. In fact, Parks' work history shows that his experience comes as an *HVAC repairman*, and not as a design or mold expert.

A. Parks Is Not Qualified to Offer Design Opinions

Parks is not qualified to testify regarding design issues in the Murphy home. Parks is not an engineer or architect. He has no college education, and has had no training in any architectural or engineering programs that address how to properly design manufactured housing walls:

Q. You're not an engineer.

A. Not an engineer.

Q. You're not a design professional.

A. No. I've not been utilized as a design -- I've been utilized to offer opinions and test these designs, but I'm not an engineer or architect.

Q. You're not qualified under the HUD code to draw and stamp prints for walls.

A. No, sir.

Q. Never had any building-science classes on how to construct walls under the HUD code?

...

A. No, because I'm not aware of any that are available.

Q. But you've never gone to a day of college in building science.

A. No, sir.

Q. No engineering, no architectural experience.

A. Again, no, sir.

Parks Depo. at 99:7-100:9.

Despite lacking any training or experience as an engineer or design professional, Parks seeks to offer his opinion that the Murphy home uses an "inappropriate wall design" that is responsible for significant structural damage. *See Parks Report at 2.* Whatever experience Parks may have inspecting manufactured homes as an HVAC repairman, that does not qualify him to

testify about design issues with the wall construction. *See Bogosian v. Mercedes-Benz of N. Am., Inc.*, 104 F.3d 472 (1st Cir. 1996) (holding that a non-engineer mechanic/consultant was not competent to testify as to design defect issues); *Smith v. Ford Motor Co.*, 882 F. Supp. 770 (N.D. Ind. 1995) (finding that a body shop mechanic/accident investigator who had repaired electrical and fuel systems was not competent to testify as to electrical and fuel systems design issues); *Tokio Marine & Fire Ins. Co. v. Grove Mfg. Co.*, 762 F. Supp. 1016 (D.P.R. 1991) (holding that a civil engineer was not competent to testify as to crane design issues because he had no experience with the design or manufacturing of cranes; a mechanical engineer would be better suited to testify); *Perkins v. Volkswagen of America, Inc.*, 596 F.2d 681 (5th Cir. 1979) (upheld a lower court ruling that a mechanical engineer with no experience designing automobiles was not competent to testify as to design issues); *Hoban v. Grumman, Corp.*, 717 F. Supp. 1129 (E.D. Va. 1989) (holding that a licensed professional engineer with degrees in electrical and mechanical engineering who had done no aerodynamic design work or engine design work was not competent to testify on such design issues). Several of the witnesses in the cases just cited were in fact engineers, but were still deemed unqualified to testify as to design issues outside of their particular field. Parks, on the other hand, is significantly less qualified, as he not only has no design experience in the particular field of manufactured housing wall construction, but he has no design or engineering education or experience whatsoever in any field.

B. Parks Is Not Qualified to Offer Opinions Regarding HUD Code Compliance

Parks' deposition testimony and conclusions display a fundamental lack of familiarity with, and misunderstanding of, the HUD Code. As discussed *supra*, HUD Code Section 504(b) governs condensation control in the exterior walls of manufactured homes and expressly allows four different wall construction designs. Parks claims that Southern's application of § 504(b) to

the Murphy home provides the primary basis for liability in this case, yet Parks is not even familiar with the basic design principles employed by § 504(b). This is evident from Parks' inability to even identify the four construction methods expressly allowed by the HUD Code, much less describe in detail how to design them. *See Parks Depo.* at 106:5-15. Furthermore, as explained below, Parks does not understand how various provisions of the HUD Code relate to each other, as evidenced by his opinion that a wall construction method can violate § 303(b),⁵ a general performance standard, even though it meets the requirements of Section 504(b), a specific prescriptive standard. *See Parks Depo.* at 180:17-181:11.

HUD develops its safety standards for the Code through a consensus process that relies on professionals with engineering expertise who provide conclusive technical documentation on issues to establish sound engineering practices. *See Declaration of David Tompos, P.E.* As a result, the Code embodies sound engineering practices, and meeting the specific requirements of this Code that is developed in this manner therefore conforms to sound and accepted engineering practices. *Id.*

Section 504(b) of the Code allows for four alternative designs for exterior walls in mobile homes: 1) walls with an interior vapor barrier of one perm or less, or 2) unventilated wall cavities sealed by a pressure envelope of at least five perms, or 3) ventilated wall cavities, or 4) for homes in Zone 1,⁶ a vapor barrier *may* be placed on the opposite side of the wall from the living space. *See* 24 C.F.R. § 3280.504(b). Each of these alternative construction designs has been deemed by HUD to represent good engineering practices. *See Tompos Declaration.* Nothing in

⁵ As mentioned *supra*, Section 303(b) provides that "All construction methods shall be in conformance with accepted engineering practices to insure durable, livable, and safe housing and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades." 24 C.F.R. § 3280.303(b).

⁶ The HUD Code divides the United States into three geographic regions, called 'thermal zones.' Zone 1 encompasses much of the Southeastern U.S. from Texas to North Carolina, Zone 2 extends across the country's midsection from North Carolina to California, and Zone 3 encompasses most of the northern half of the country. 24 C.F.R. § 3280.506.

the Code prohibits the use of a 504(b)(1) wall construction in Zone 1. *See generally* 24 C.F.R. § 3280. Furthermore, HUD has stated that it does not have data, research, or other information that would substantiate restricting § 504(b)(1) to Zones 2 and 3. *See* Tompos Declaration; Parks Depo. Excerpts from *Deese v. Legend Enters., Inc.*, Exhibit E, p. 176:12-20. Indeed, the wall designs utilized in the Murphy home are the most widely used condensation control method in the industry for all climactic conditions and have been approved by a third party inspection agency comprised of engineer design professionals as required by the HUD regulations. *Id.*

Parks argues that because Section 303(b) requires all manufactured homes to be built in accordance with “accepted engineering practices,” placing an interior vapor barrier in a hot and fringe zone climate violates the HUD Code even though Section 504(b)(1) specifies interior vapor barriers as an appropriate design option for every climate zone. *See* 24 C.F.R. at §§ 3280.303(b), 3280.504(b)(1). Parks’ opinion fundamentally misrepresents HUD’s own code interpretation and its enforcement policy. As HUD has explicitly stated as recently as 2007:

Consistent with basic principles of administrative law, it is HUD’s practice to hold manufacturers accountable for compliance with the standard that most specifically applies to a particular aspect of construction. Accordingly, there is no case in which HUD has applied 3280.303(b) to a manufacturer that has complied with 3280.504(b).

HUD Letter from Assoc. Deputy Asst. Sec. for Reg. Affairs and Mfr’d Housing, January 19, 2007, Exhibit F.

Because Parks does not have an engineering background and because his statements and opinions exhibit a fundamental misunderstanding of basic principles contained within the HUD Code, Parks should not be allowed to opine that the Murphy wall construction violates the HUD Code.

C. Parks Is Not Qualified to Offer Opinions Related to the Interpretation of Mold Sampling Data

Parks also lacks the qualifications necessary to interpret mold sampling data. Parks himself admits that he is not a mold expert and would not hold himself out to be one in federal court. *See* Parks Depo. at 34:18-35:4. He has no college education, no training in biology or the environmental sciences, and little or no training in mold remediation. Parks Depo. at 19:10-22:19. While Parks appears to hold a mold remediation license from the state of Louisiana, he admits that he has never actually performed a single mold remediation:

Q. How many jobs have you served as a licensed mold remediator for where you've actually remediated a building?

A. None.

Id. at 29:5-8. Parks also admits that he has no more than fifteen days of training in the area of mold interpretation. *Id.* at 35:4-37:9.

Notwithstanding his lack of training, education, and experience, Parks believes he is qualified to testify about the interpretation of mold sampling data. This claim is refuted by The Institute of Inspection, Cleaning and Restoration Certification S520 Standard and Reference Guide for Professional Mold Remediation (“S520”), which is accepted by the scientific community as a primary authority for industry standards in the field of mold evaluation and remediation of indoor environments. *See* Declaration of Keith E. Leese, Exhibit G. Professionals performing indoor fungal evaluations should be familiar with these industry standards and their terminology and recommended procedures. *Id.* Parks agrees that the S520 represents acceptable industry standards, *see* Parks Depo. Excerpt from *Ford v. Champion Home Builders, Co.*, Exhibit H, pp. 150:21-151:02, but nonetheless displays a fundamental lack of knowledge and familiarity with basic terminology and concepts in the mold remediation and evaluation field.

For example, Indoor Environmental Professional (“IEP”) is a commonly used designation in the industry used to refer to individuals qualified to perform an assessment of the fungal ecology of a building, conduct mold sampling, interpret lab data, and determine the magnitude of any mold problems that are found. *See* Leese Declaration. Parks testified that he has never heard the term and does not know what an IEP is. Parks Depo. at 169:2-10. Terms such as “normal fungal ecology,” “primary, secondary, and tertiary fungal colonizers,” and “Condition 1, Condition 2, and Condition 3” are defined in the S520 and are used as the industry standard to describe various types and levels of fungal contamination found in an indoor environment, *see* Leese Declaration, but Parks shows in his deposition that he is unfamiliar with these foundational terms:

Q. Can you tell me the difference between a primary, secondary, and tertiary colonizer of fungi?

A. No, sir...

Q. Do you know what a Condition 1, Condition 2, or Condition 3 environment in a home is relative to mold infiltration or contamination?

A. No, sir, I'm not familiar with that terminology.

Q. What is normal fungal ecology?

A. Normal fungal ecology?

Q. Yes, sir.

A. I don't know that I can specifically define that for you here.

Parks Depo. at 12:10-13, 13:15-20, 29:22-30:3. Parks' lack of knowledge of these basic concepts of mold investigations demonstrates that he is unqualified to perform such investigations. *See* Leese Declaration. According to the S520, IEPs are qualified to interpret laboratory data on the mold samples taken in the course of a fungal ecology assessment, but

mold remediators (which Parks claims to be) are not. *Id.* Because Parks is not an IEP, he is not qualified to interpret mold laboratory data according to industry standards. *Id.* Therefore, he cannot satisfy the Rule 702 requirements for expert testimony in this area.

II. Parks' Methodology Is Unreliable

As previously stated, the reliability of an expert's methodology is critical to determining whether expert testimony assists the trier of fact. *Daubert*, 509 U.S. at 589. Rule 702 imposes a duty upon district courts to act as "gatekeepers" and ensure that speculative and unreliable opinions do not reach the trier of fact. *McCorvey*, 298 F.3d at 1257; *Daubert*, 509 U.S. at 589 (requiring that courts "ensure that any and all scientific testimony or evidence admitted is not only relevant but reliable"). Fulfilling this "gatekeeper" duty requires a court to "assess the reasoning and methodology underlying the expert's opinion and determine whether it is both scientifically valid and applicable to a particular set of facts." *Goebel v. Denver & Rio Grande W. R.R. Co.*, 346 F.3d 987, 991 (10th Cir. 2003).

In considering the methodology employed by the proffered expert, "*any step that renders the analysis unreliable . . . renders the expert's testimony inadmissible*." This is true whether the step completely changes a reliable methodology or merely misapplies that methodology." *Moore v. Ashland Chem., Inc.*, 151 F.3d 269, 279 n.11 (5th Cir. 1998), *cert. denied*, 526 U.S. 1064 (1999) (emphasis added) (internal citations omitted).

To aid in this inquiry, the Supreme Court has identified four factors that bear on the reliability of expert testimony. *Daubert*, 509 U.S. at 592-94. Those factors include: (1) whether a theory or technique can be or has been tested; (2) whether it has been subjected to peer review

and publication; (3) whether a technique has a high known or potential rate of error and whether there are standards controlling its operation; and (4) whether the theory or technique enjoys general acceptance within a relevant scientific community. *Id.* These factors are neither definitive nor exhaustive, and a federal court should consider any additional factors that may advance its Rule 702 analysis. *Kumho*, 526 U.S. at 150.

Applying these standards to Parks' methodology, it is clear that Parks' methods are not scientifically reliable. In fact, Parks makes multiple methodological errors, any one of which by itself renders his analysis unreliable. *Benkwith*, 467 F. Supp. 2d at 1322 ("any step that renders the analysis unreliable under the *Daubert* factors renders the expert's testimony inadmissible") (internal citations omitted). Taken together, Parks' multiple errors only compound the problems with his analysis. As such, his conclusions are unreliable and without any scientific merit.

A. Parks' Use of Moisture Meters in the Murphy Home is Unreliable

Parks employed unreliable methodology in his attempt to use moisture meter readings to show excessive moisture accumulation within the walls. It is well established that moisture meters are unreliable and cannot properly measure the actual moisture content of gypsum wallboard. *See* Declaration of Francis Conlin, P.E., Exhibit I. Moisture meters such as the one used by Parks on the Murphy home measure the dielectric strength, called the capacitance, of a material in its proximity. *Id.* Water content influences capacitance, but it is an electrical property of the gypsum wallboard that is actually being measured by the device, not the moisture level itself. *Id.* If a moisture meter is properly calibrated, it is possible to compare the moisture content of one portion of a wall to another, but to determine the actual moisture content of gypsum wallboard, it is necessary to remove a piece of the wallboard and bake it to measure the amount of water that is removed in the baking process. *Id.* Parks admits that he has never

calibrated his moisture meter and agrees that the readings cannot be used to determine actual moisture content:

Q. You've used the meter for years and you've never calibrated it.

A. This one, that's correct.

...

Q. Now, you would agree with me if you found moisture readings of 25 to 40 percent, you can't say what the absolute percentage of moisture in those walls is because you didn't cut and bake the sample.

A. That is correct.

Q. And cutting and baking is the only authoritative way to know for sure.

A. That's correct.

Parks Depo. at 127:22-128:1, 131:21-132:7. Therefore, any attempt by Parks to make claims about the absolute moisture content of the walls based on moisture meter readings is improper, unreliable, and not based on any scientific standards.

However, despite Parks' acknowledgement that his moisture meter readings do not, and cannot, measure the actual moisture content in these gypsum walls, Parks nonetheless relies on his moisture meter readings to opine that the walls had too much moisture on an absolute scale. Parks knew how to determine the actual moisture content, but he did not perform the cut and bake test necessary to do so. Instead, despite knowing that moisture meters, even when used properly on gypsum wallboards, are only good for comparative studies, Parks, without reference to any scientifically accepted standards or peer-reviewed methodology, relied on the moisture meter readings to opine that the Murphy walls were prematurely deteriorating because of moisture accumulation. *See Parks Report* at 3. Simply put, Parks' use of moisture meters in his investigation was unreliable and inadmissible. *See Benkwith*, 467 F. Supp. 2d at 1328 (refusing

to admit proposed expert testimony when the expert “leap[s] from an accepted scientific premise to an unsupported one”).

B. Parks’ Did Not Conform to Industry Standards in His Thermographic Imaging of the Murphy Home

Parks’ use of an infrared camera in his investigation is similarly unreliable. Parks used an infrared camera to measure the temperature distribution of the wallboard, *see* Parks Depo. at 132:8-10, but he failed to adhere to industry standards in doing so. Infrared cameras can be set at different levels to focus on temperature variations of different magnitudes. *See* Conlin Declaration. For example, a camera can be programmed to highlight temperature differences as small as one degree Fahrenheit, or it can be programmed to only display variations of ten degrees or more. *Id.* Translating this temperature profile into reliable information on moisture content requires removal of the specific portion of the wallboard in question to examine the quality of insulation, the presence of extra thermal bridging, and possible air leakage in the wall. *Id.*

The ASTM (American Society for Testing and Materials) Standard Practice for Thermographic Inspection provides the accepted industry standards in the field of thermographic imaging. *Id.* These standards call for certain criteria to be met before an infrared camera can be used reliably. *Id.* For example, the difference between the indoor and outdoor temperature should be at least 18 degrees Fahrenheit for at least four hours prior to inspection. *Id.* In addition, an inspector should not allow any direct sunlight on an inspected surface for at least three hours prior to the inspection. *Id.*

Parks, however, testified that he does not know what settings were used in his thermographic imaging of the Murphy home. *See* Parks Depo. at 132:8-136:9; *see also* Parks Report. Parks cannot state the magnitude of the temperature differentials captured by the camera. *Id.* Parks cannot point to, and did not document, any attempt to measure or control for

sunlight exposure prior to the moisture meter use. *Id.* Parks cannot point to, and did not document, any attempt to measure the difference between the inside and outside temperature, either at the time of testing or for the several hours before testing. *Id.* Parks did not take the time to remove a small part of the gypsum wallboard to inspect it for moisture content. *Id.* These actions by Parks violate the ASTM industry standards for thermographic imaging. *See* Conlin Declaration.

Parks' reports and opinions regarding his use of the infrared camera also ignore the fact that the HUD Code explicitly allows for a certain amount of heat transfer within the walls of a manufactured home. *Id.* These areas are known as "thermal shorts." Thermal shorts are present in all wall construction, and the HUD Code allows thermal shorts to cover up to one percent of the total exterior wall surface area. 24 C.F.R. § 3280.508(c). The areas identified in Parks' infrared pictures that display temperature differentials of an unknown magnitude compose an aggregate area of far less than one percent of the exterior wall surface area. *See* Tompos Declaration. The fact that Parks does not acknowledge that thermal shorts are allowed under the HUD Code underscores his lack of familiarity with the Code and his lack of thoroughness in the thermographic inspection. *Id.*

Without adhering to industry standards in either the preparation for, or documentation of, thermographic imaging, Parks' methodology cannot be relied upon for useful or accurate information.

C. Parks' Methodology for Mold Sampling in the Murphy Wall Cavities Lacks Scientific Validity

Parks claims that the presence of mold within certain portions of the Murphy wall cavities proves there is a defect in the structural integrity of the walls. There are several problems with this approach. First, it is not considered unusual to find fungal spores in a wall

cavity, and there are no industry standards for what constitutes an acceptable level of fungal spore counts in the wall cavity of a building. *See* Leese Declaration. Accordingly, any conclusion Parks draws from the presence of fungal spores in the wall is not based on established industry standards. As such, Parks is engaging in conjecture and his opinions are not the product of the scientific method. Second, the standards referenced by Parks in his report as evidence of “high” levels of mold — the Baxter/ETS and National Allergy Bureau standards — are not standards for microenvironments like wall cavities, but are instead designed for indoor occupant spaces and outdoor air environments, respectively. *Id.* Parks application of these “standards” to wall cavity air samples is therefore misleading and unreliable. Parks even admits that he has no authoritative source that supports his methodology:

Q. You don't have any authoritative source to indicate one way or the other whether indoor wall or -- whether wall sampling that you took can be applied to these standards.

A. I agree. That's my opinion.

Parks Depo. at 142:5-10.

Regardless of the mold spore count in a given area, interpreting such results requires consideration of other data such as the observation and testing of the physical condition of the materials being sampled. *See* Leese Declaration. Parks failed to properly take into account the actual condition of the gypsum wallboard at issue, which turned out after testing to significantly exceed industry performance standards. *See* Tompos Declaration. Specifically, portions of the gypsum wallboard were removed from the Murphy home and sent to an independent accredited laboratory for testing in accordance with ASTM standards, accepted as the industry standard for gypsum testing. *Id.* The test results showed that the Murphy wallboard *exceeded* the industry

standard for flex strength by 87%, for core hardness by 236%, and for nail pull resistance by 83%. *Id.* Without accounting for these critical variables, Parks' conclusions are unreliable.

In general, Parks' wall cavity sampling methodology lacks scientifically valid standards and procedures. By pushing the insulation away from the gypsum wallboard to obtain an air sample, Parks compromises the air samples. *See Conlin Declaration.* According to Parks himself, he created his own sampling methodology, which did not include true random sampling. *See generally Parks Depo. Excerpts from Deese at 277-86.* Parks' methodology has not been peer-reviewed for validity or generally accepted by other scientists in the field. *Id.; see also Conlin Declaration.* As a result, his methodology is unreliable and the results derived from that methodology should not be admitted into evidence.

D. Parks Failed to Account for Alternate Sources of Moisture

Perhaps Parks' greatest methodological error was his failure to account for alternate sources of moisture. Parks' contention is that the vinyl covered gypsum wallboard caused condensation to accumulate within the wall cavity. However, Parks failed to consider, much less rule out, several factors that are known to regularly influence moisture levels in manufactured home walls. Standard industry practice and standard scientific methods require testing for alternative explanations for any observed moisture accumulation in a case like this. *See Conlin Declaration; see also Benkwith, 467 F. Supp. 2d at 1325* ("Scientific methodology is based on generating hypotheses and testing them to see if they can be falsified ... This experiment appears to have been undertaken more to bolster a conclusion than to test a hypothesis."). Without controlling for these factors, it is impossible to evaluate the cause for the alleged moisture problem. *See Conlin Declaration.* Indeed, with Parks' inadequate methodology, it is impossible

to tell whether the interior vapor barrier is even contributing to any problem at all. Omission of these factors in Parks' analysis is a fatal flaw that renders the report's conclusions unreliable.

For example, Parks does not consider, much less rule out, alternate sources of moisture such as roof leaks or bulk water leaks, both of which the Plaintiff complained about⁷:

Q. Did you ask [the Murphies] about any water leaks or roof leaks in ... your investigation?

A. Not that I can recall.
...

Q. Did you ask the Murphies if they'd ever experienced a significant or any kind of plumbing leak in any of the bathrooms or kitchen?

A. No, sir, I did not.

Q. Did you rule out plumbing leaks in the bathrooms or the kitchen?

A. I don't think they had any effect on what I found in the wall structures.

Q. Did you rule them out?

A. I didn't investigate them.

Parks Depo. at 16:14-18, 17:19-18:6.

Parks also failed to consider the impact that high moisture levels in the crawlspace might have on the moisture level of the wall cavities. *See* Conlin Declaration. Indeed, he never even entered the crawlspace to investigate it as a possible source of moisture. *Id.* If he had, he would have noticed improper ventilation and poor drainage in the crawlspace with the potential to contribute significantly to high moisture levels under the house. *Id.* Parks also failed to consider air leakage from, among other sources, poorly sealed light fixtures as a factor, despite the fact experts in the field consider air leakage to be a significant factor in possible moisture

⁷ Plaintiff testified that a pipe burst underneath the sink in the master bathroom and that he asked his insurance company to investigate possible roof leaks above the master bathroom. *See* Plaintiff's Depo. Excerpts, Exhibit J, pp. 38:9-43:4, 77:5-79:13.

accumulation in mobile home walls. *Id.* All of these factors should have been taken into account in a proper investigation of potential moisture problems in manufactured housing walls. *Id.*

III. Parks' Conclusions Do Not Reasonably Flow from His Data

Daubert requires that the court focus primarily on the principles and methods employed by the expert. 509 U.S. at 594-595. At the same time, though, it is well settled law that expert testimony must be “more than belief or unsupported speculation.” *See id.* at 590. The Eleventh Circuit has likewise held that the district court’s role is to “ensure that the proposed expert testimony is ‘relevant to the task at hand,’ ... i.e., that it logically advances a material aspect of the proposing party’s case.” *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1312 (11th Cir. 1999), quoting *Daubert* (on remand), 43 F.3d at 1315. Therefore, the evidence must have a valid scientific connection to the disputed facts in the case. *Daubert*, 509 U.S. at 591. This connection has been appropriately denominated as “fit.” *Id.* The Supreme Court has recognized that:

Conclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data. But nothing in either Daubert or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the ipse dixit of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.

Joiner v. General Electric, 522 U.S. 136, 146 (1997); *see also Guillory v. Domtar Indus., Inc.*, 95 F.3d 1320 (5th Cir. 1996) (“Expert evidence based on a fictitious set of facts is just as unreliable as evidence based on no research at all. Both analyses result in pure speculation.”).

“[T]he court is now obliged to screen expert testimony to ensure it stems from, not just reliable methodology, but also a sufficient factual basis and reliable application of the

methodology to the facts.” *Rudd v. General Motors Corp.*, 127 F. Supp. 2d 1330, 1336 (M.D. Ala. 2001).

Several of Parks’ conclusions are “connected to existing data only by the *ipse dixit* of the expert.” *See Joiner*, 522 U.S. at 146. Parks’ conclusion that HUD Code violations are causing structural deterioration is one of those conclusions that is not supported by Parks’ investigation. Rather, it is refuted not only by the HUD Code issues previously discussed, but it is also in direct conflict with Parks’ own deposition, in which he admitted that the HUD Code does in fact still allow 504(b)(1) walls in the humid and fringe zone climate, as well as Parks’ own unsuccessful efforts to change the Code to prohibit the use of such walls in Zone 1. *See Parks’ Depo.* at 182:2-21. Parks’ claim of structural deterioration also suffers from a complete lack of physical evidence of problems in the walls themselves. Instead, Parks relies on uncalibrated relative moisture meter readings to conclude that the walls have excessive moisture accumulation, but he never tested the actual moisture content of the walls. *See Conlin Declaration*.

The results of testing by an independent accredited laboratory certified to test gypsum wallboard shows that the vinyl covered gypsum board from the Murphy home not only conforms to industry performance standards, but actually exceeds the industry standards by a considerable margin. *See supra*; Tompos Declaration. Ignoring the actual physical condition of the walls in the Murphy home is a fatal flaw in his methodology and conclusions.

Parks’ conclusions regarding condensation as the cause of moisture accumulation in the walls similarly do not comport with the existing data. In addition to Parks’ failure to consider several viable alternate sources of moisture, discussed *supra*, Parks also failed to take into account the actual weather data for the area. *See Conlin Declaration*. An analysis of historical weather data for Montgomery, where the Murphy home is located, shows that there have been

only 12 days over the past four years when the outside daily dew point average was above 75 degrees, which is typically the wall temperature of mobile homes in the summertime based on a thermostat setting of 72 degrees. *Id.* When the wall cavity surface is warmer than the dew point of the outside air, condensation in the wall cavity is impossible. *See Parks Depo.* at 177:7-10 (“The surface temperatures would have to be below the dew point of the outside air in order for the actual state of – act of condensation to occur”).

Parks also asserts without justification that the presence of mold in the wall cavity proves that the walls themselves are already or will eventually become structurally unsound:

Q. Now, on page 2 of the report, you say the moisture has caused structural deterioration.

A. In my opinion, yes, sir, it has.

Q. Where in your report do you provide evidence of that?

A. I would say that the mold sampling, the fact that the -- we have mold present.

Q. Has affected the structure?

A. The gypsum board structure, in my opinion, yes, sir.

Q. Can you show me any picture of any wallboard anywhere where the back paper of the wallboard has been deteriorated and degraded? ... Specifically. Can you show me where exactly?

A. Okay. Based on the testing showing there was mold growth, Figure 1, Figure 2 --

Q. Well, that's indication of mold growth, not that the structure's been compromised; right?

A. In my opinion, if we've got moisture and mold growth, then we've compromised the structure of that gypsum board.

Parks Depo. at 128:2-129:5. Yet after his investigation, Parks could not provide any evidence of “soft” walls (“Q. So sitting here today, you don't know which of the walls were soft?; A. No. I couldn't specifically point out which ones.” *Parks Depo.* at 148:1-4.) or any evidence of actual

moisture content, and as a result, he was forced to base his claim of structural deterioration on the mere presence of mold. However, the presence of mold by itself does not prove that moisture is currently present, and it certainly does not necessarily mean the walls will deteriorate in the future. *See* Leese Declaration. It only shows that mold spores are present, but their source is unknown and can only be determined by a proper scientific investigation. *Id.*

Indeed, Parks cannot say whether any mold that was present in the Murphy wall cavities was viable or not:

Q. And to this point and because your reports are now in, you don't know sitting here today whether they're viable or not.

A. No, sir, I don't.

Parks Depo. at 152:19-23. Consequently, Parks has no way of determining whether any mold that may exist in the wall cavity resulted from a one-time bulk water leak or resulted instead from regularly occurring condensation within the wall cavity. *See* Leese Declaration. Given the “analytical gap between the data and the opinion proffered,” this Court must take seriously its gatekeeper role and ensure that Parks “has a sufficient factual basis and reliable application of the methodology to the facts” to support any conclusions before admitting them into evidence. *See Rudd*, 127 F. Supp. 2d at 1336; *Joiner*, 522 U.S. at 146; *Aucoin v. Southern Quality Homes, LLC*, No. 99791-C (La. Dist. 16 2005), *aff'd* by No. 06-979 (La. App. 3d Cir. 2006) (describing Bobby Parks as “an extreme advocate” whose “testimony went well beyond the scope of his written report... the Court cannot place weight on the testimony of this witness as it is not substantiated and corroborated by the evidence on the scene”).⁸ An objective analysis of the

⁸ This case is the only one Defendant is aware of in which Parks was admitted as an expert in a moisture-related case. The trial court decision, along with the appellate decision affirming it, is attached as Exhibit ____.

record clearly demonstrates that in this case, Parks has neither the qualifications, a sufficient factual basis, reliable methodology, nor a reliable application of that methodology.

CONCLUSION

For the reasons set out in this brief, Defendant Southern Energy Homes, Inc., respectfully moves this Court to exclude the testimony and opinions of Bobby Parks.

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CERTIFICATE OF SERVICE

I hereby certify that on February 8, 2007 I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the following:

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